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Neurological Sciences

LE JOURNAL CANADIEN DES

Sciences Neurologiques



Joseph Babinski
(1857-1932)



Neurenteric cyst

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Zelma HT Kiss

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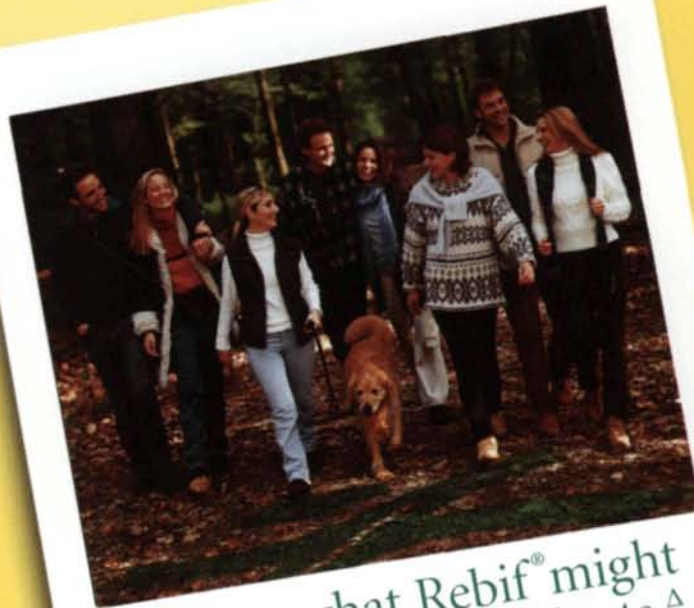
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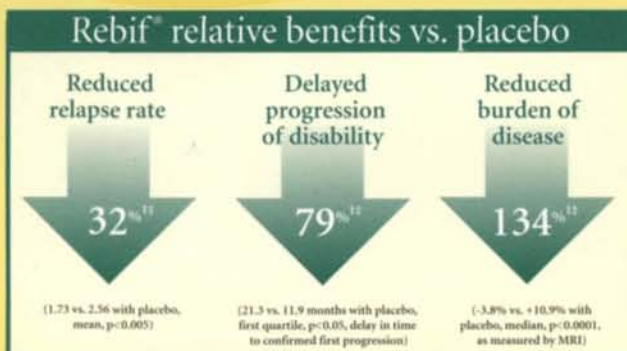
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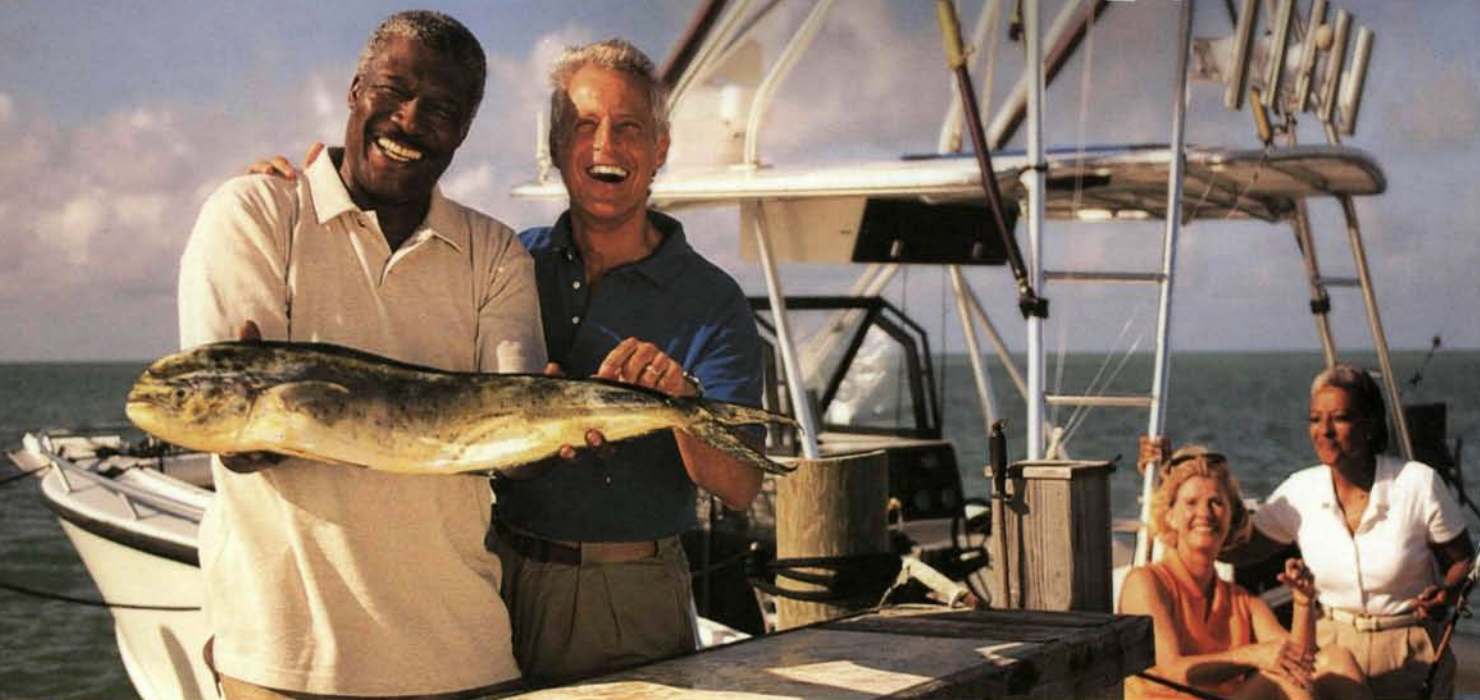
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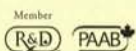
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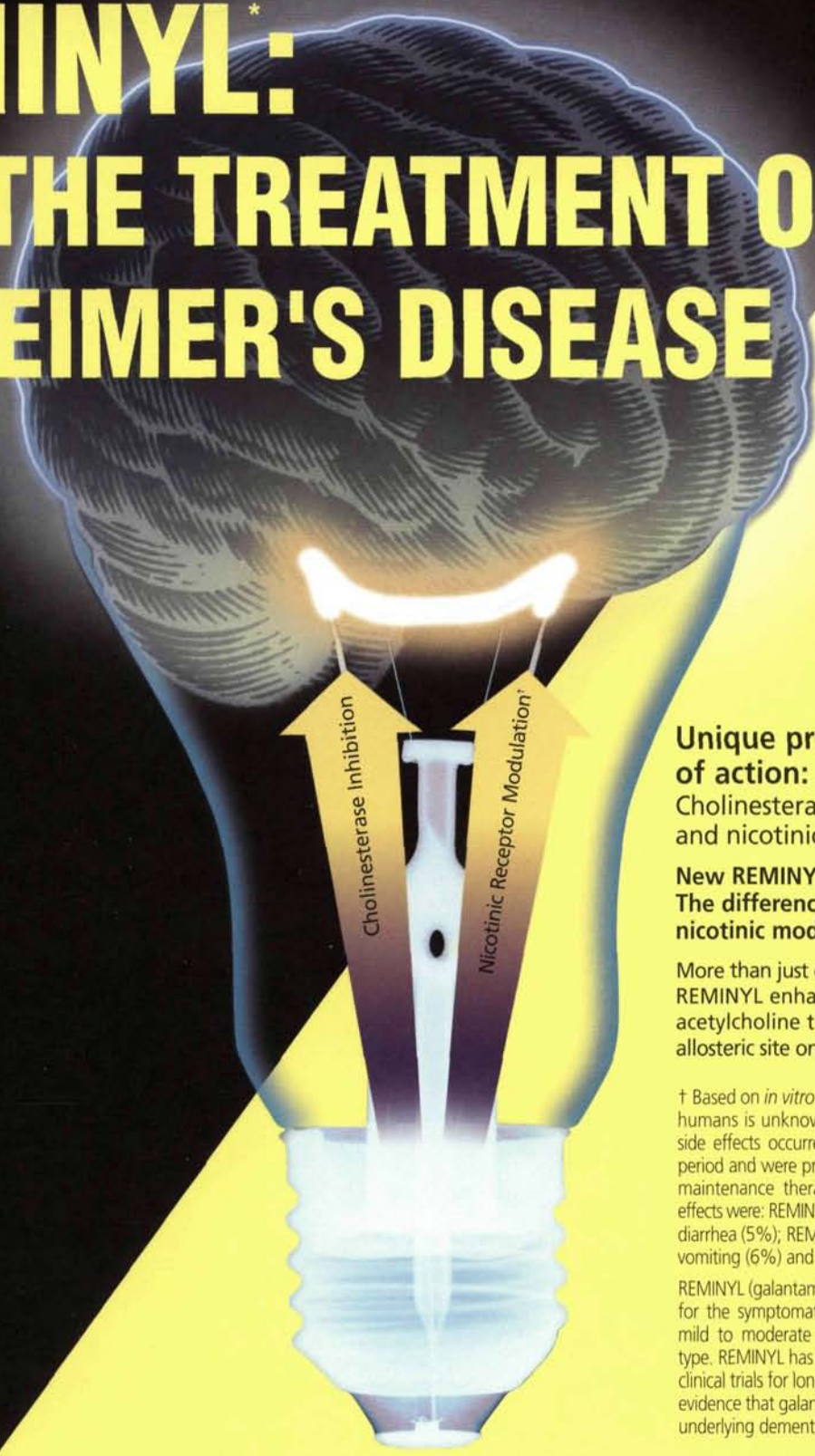
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

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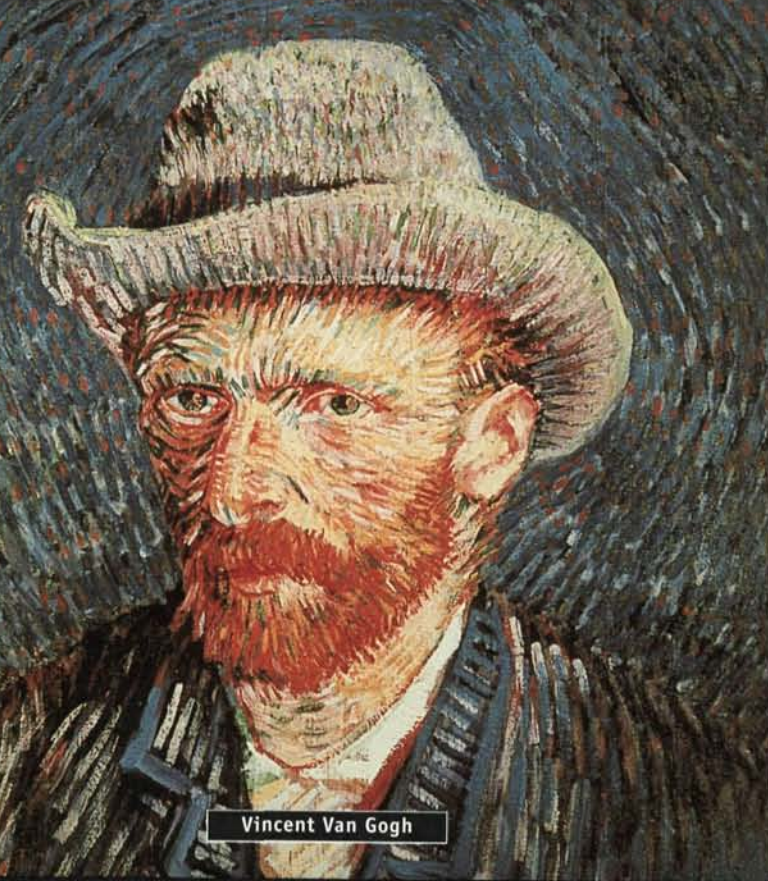
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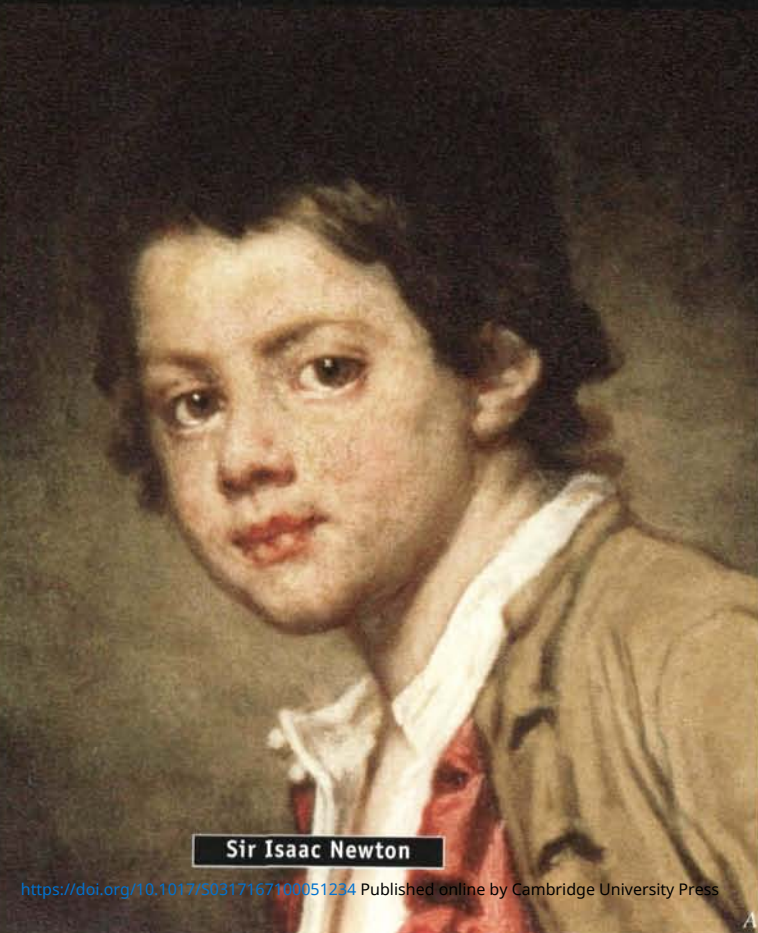


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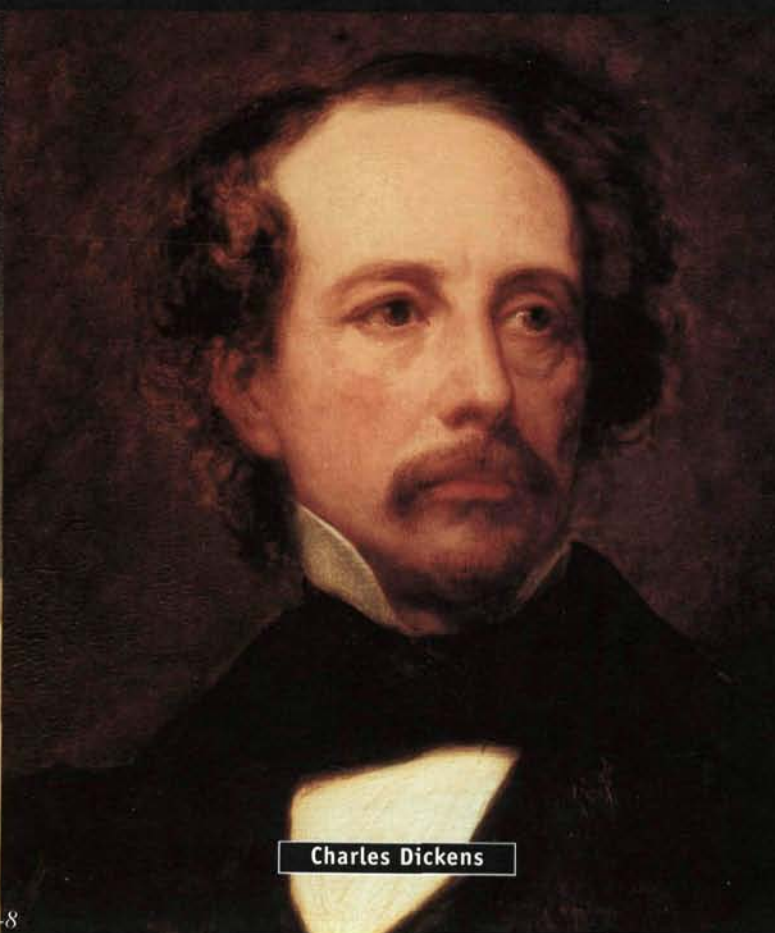


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[†] Open label, 20 week trial (n=450 Adults). Optimal dosing was 300-350 mg/day (Average 288 mg/day).

[‡] Open label trial for children (n=72) treated for ≥3 months. Average dose of 10 mg/kg/day.


[§] CNS adverse events: Somnolence (30.1%), dizziness (28.3%), ataxia (21.2%), speech disorders (16.8%), psychomotor slowing (16.8%), nystagmus (15.0%), paresthesia (15.0%), nervousness (15.9%), difficulty with concentration/attention (8.0%), confusion (9.7%), depression (8.0%), anorexia (5.3%), language problems (6.2%) and mood problems (3.5%). In an audit of 1446 adults and 303 children, there appeared to be a similar pattern of adverse events.

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Journals

Yang JF, Fung M, Edamura R, et al. H-Reflex modulation during walking in spastic paretic subjects. *Can J Neurol Sci* 1991; 18: 443-452.

Chapter in a book

McGeer PL, McGeer EG. Amino acid neurotransmitters. *In*: Siegel GJ, Albers RW, Agranoff BW, Katzman R, eds. *Basic Neurochemistry*. Boston: Little, Brown & Co., 1981: 233-254.

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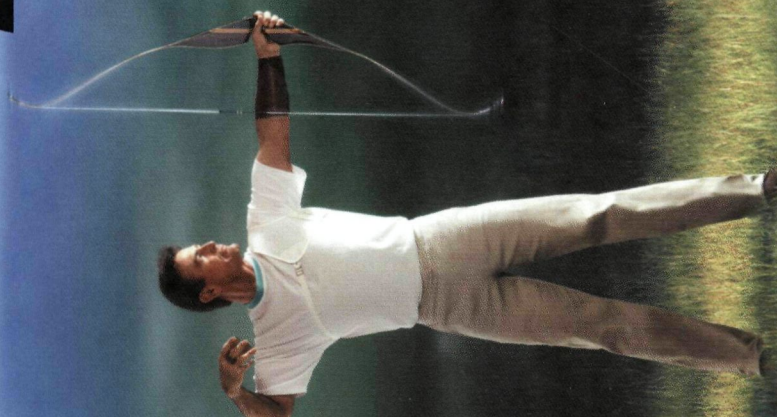
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(type IIa and IIb)^{††}

TG 25-56%
(type II)^{††}

LDL-C 39-60%
(type IIa and IIb)^{††}

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- EVIDENCE** ➤ Demonstrated delayed time to first ischemic event in stable CAD patients^{3*} (n=341, p=0.03)

‡ The Atorvastatin Versus Revascularization Treatments (AVERT) study examined the effect of intensive lipid-lowering in patients with stable coronary artery disease and LDL-C at least 3.0 mmol/L in patients referred for percutaneous transluminal coronary angioplasty (PTCA). Patients were randomized for 18 months to LIPITOR 80 mg daily or to PTCA with usual medical care which could include lipid metabolism regulators. The results of the AVERT study should be considered as exploratory since several limitations may affect its design and conduct. In the medical-treated group with LIPITOR there was a trend for a reduced incidence of ischemic events and a delayed time to first ischemic event. The results also suggest that intensive treatment to target LDL-C levels with LIPITOR is additive and complementary to angioplasty and would benefit patients referred for this procedure.¹



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* pH 7.1 to 7.8 when reconstituted.

† Clinical significance has not been established.

‡ Prospective, multicentre study. Patients with RRMS were randomly assigned to self-administer either Betaseron 250 µg s.c. every other day or interferon beta-1a 30 µg i.m. once weekly. Scans were analyzed centrally by independent investigators who were unaware of treatment allocation and clinical characteristics of patients.



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- 60% relative risk reduction (29% absolute risk reduction; $p < 0.001$) in the appearance of new T₂ lesions with Betaseron® (n=76) vs. interferon beta-1a i.m. (n=73) after two years (comparative clinical significance has not been established)^{‡5}

BETASERON® (interferon beta-1b) is indicated for the reduction of the frequency of clinical exacerbations in ambulatory patients with relapsing-remitting multiple sclerosis and for the slowing of progression in disability and the reduction of the frequency of clinical exacerbations in patients with secondary-progressive multiple sclerosis.

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25 Years Ago in the Canadian Journal of Neurological Sciences

SPONTANEOUS DISSECTION OF CERVICO-CEREBRAL ARTERIES

C. Miller Fisher, Robert G. Ojemann And Glenn H. Roberson

SUMMARY: Sixteen cases of spontaneous dissection of the cervical internal carotid artery (6 verified) are described. The mean age was 45 years. The clinical picture varied from simply headache and a bruit to hemiplegia and aphasia. Eleven patients had transient ischemic attacks. Headache, facial pain, a subjective bruit, oculosympathetic palsy and transient monocular blindness were present in various combinations in two-thirds of cases and their presence suggested the correct diagnosis. Examples of suspected dissection of the intracranial internal carotid, middle cerebral, posterior cerebral and extracranial vertebral arteries are also presented. Spontaneous dissection is more common than the literature indicates.

Can. J. Neurol. Sci. 1978;5: 9

MICROVASCULAR ANASTOMOSIS FOR CEREBRAL ISCHEMIA IN 19 PATIENTS: A PRELIMINARY REPORT

P.J. Murray

SUMMARY: The general principles of bypass surgery as they affect the cerebral circulation are reviewed. The preliminary results of an extracranial intracranial bypass operation performed on a group of 19 patients suffering from cerebral ischemia are presented. The results of the surgery compare favorably with those published in the literature.

Can. J. Neurol. Sci. 1978;5: 21

BRAIN METABOLISM AND ARTERIAL ACID-BASE BALANCE FOLLOWING BILATERAL CAROTID OCCLUSION IN NORMOTENSIVE AND EXPERIMENTAL HYPERTENSIVE RATS

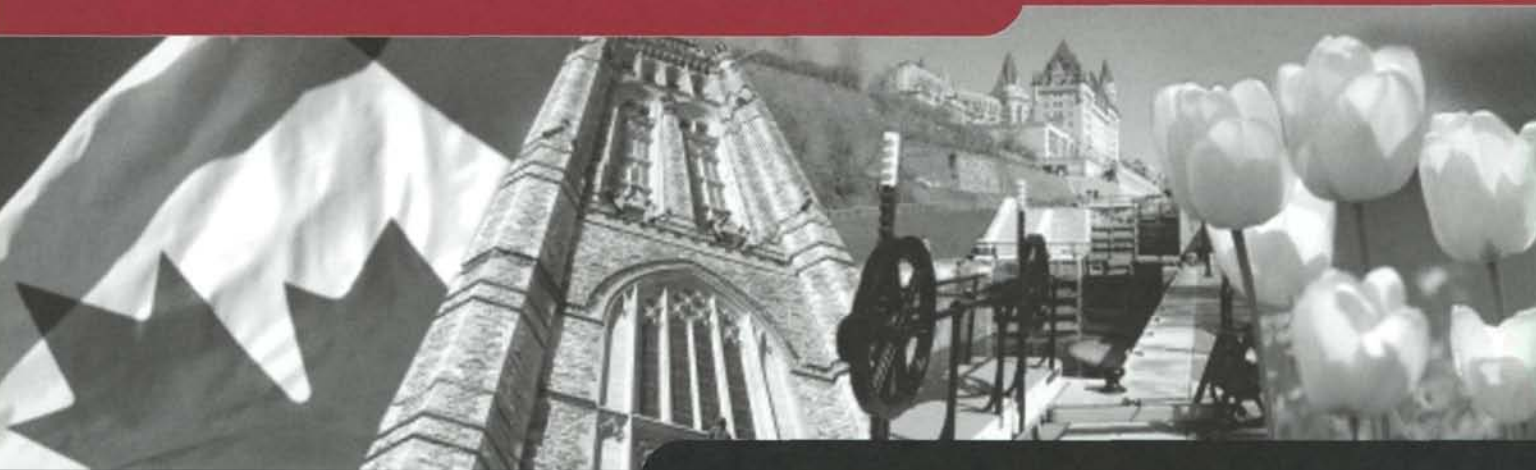
M. Fujishima, Y. Morotomi, K. Tamaki, Y. Nakatomi, J. Ogata, S. Takishita,
K. Kumamoto, K. Fukiyama and T. Omae

SUMMARY: The effects of bilateral common carotid artery occlusion on brain metabolism and arterial acid-base balance were studied in normotensive and experimental renovascular hypertensive rats.

One hour after carotid occlusion in hypertensive rats, supratentorial lactate increased to 383% and lactate-pyruvate ratio to 280% of the controls, while adenosine triphosphate (ATP) decreased to 69%. These metabolic changes were thought to be due to cerebral ischemia. Arterial pCO₂ was lowered and the pH was raised in the hypertensive animals due to cerebral ischemia induced hyperventilation. In the normotensive rats, carotid occlusion had minimal effects on cerebral metabolism and arterial acid-base balance.

These results suggest that hypertensive rats are more susceptible to cerebral ischemia caused by carotid occlusion than normotensive rats. Increased cerebrovascular resistance in hypertension is discussed as a casual factor in cerebral ischemia.

Can. J. Neurol. Sci. 1978;5: 27



PROGRAMME PROVISOIRE

Tuesday, June 14th, 2005

Neurobiology Review Course
ALS Strategies for Quality Life/Quality Care
Movement Disorders Video Session
Epilepsy Video Session

Wednesday, June 15th, 2005

Spinal Course
Epilepsy – Consensus and Controversies in Epilepsy
EMG
Neuroanatomy
EEG
Brain Tumours - Current Standard and Advances in
Neuro-Imaging for Treatment of Brain Tumours
MRI in MS and Stroke and Functional MRI
Sleep – Review and Update in Neurology-Related
Pediatric and Adult Sleep Disorders
Welcome Reception

Thursday, June 16th, 2005

Plenary Session I - Peripheral Nerve
Platform and Poster Sessions
Grand Rounds
Dementia

Friday, June 17, 2005

Plenary Session II - Education and Manpower
Platform and Poster Sessions
Plenary Session III - Rehabilitation – Joint Session with
Canadian Association of Physical Medicine and
Rehabilitation
Friday Night Social

Saturday, June 18th, 2005

Mini-symposia:
A Pain in the Head
Maximizing CME/Maintenance of
Certification Opportunities
Neurocritical Care
Child Neurology Day – Advances in the Diagnosis and
Treatment of Pediatric Neuromuscular Diseases
Stroke
Multiple Sclerosis

**The
First and Only
MS Therapy**
Now Indicated for People after
the First Demyelinating Event

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Interferon with Less Interference

Neutralizing antibodies (NABs) may significantly impact IFN β 's ability to bind to receptors and initiate an immunomodulatory process.

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- ▶ The majority of NABs usually appear during the first 12 months after initiation of IFN β therapy (ranging from 3 to 18 months).^{2,5}

Once-a-week AVONEX[®] – Efficacy that Lasts:

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- ▶ 32% reduction in annual exacerbation rate over 2 years (0.61 vs. 0.90; p=0.002).^{*,5}
- ▶ Significant reduction in the number (0.8 vs. 1.6; p \leq 0.05) and volume (p=0.03) of Gd-enhanced lesions at 2 years^{Ω,#,5}, and in the number of new and enlarging T2 lesions over 2 years (2.0 vs. 3.0; p=0.002).^{*,5}
- ▶ Delayed worsening in brain atrophy during the second year (p=0.03).^{+Δ,5}
- ▶ Delayed worsening in cognitive function demonstrated on 2 neuropsychological parameters (Information Processing/Memory[†], p=0.011 and PASAT[‡] p=0.023).^{Δ,5}

AVONEX[®] (Interferon beta-1a) is indicated for the treatment of relapsing forms of MS and for the treatment of people who have experienced a single demyelinating event, accompanied by abnormal Magnetic Resonance Imaging (MRI) scans with lesions typical of MS, to delay the onset of clinically definite multiple sclerosis (as determined by a second demyelinating event), and to decrease the number and volume of active brain lesions and overall disease burden (as identified by MRI scans). Before initiating treatment with AVONEX[®], alternate diagnoses should first be excluded.

AVONEX[®] is generally well tolerated. The most common side effects associated with treatment are flu-like symptoms, muscle ache, fever, chills, and asthenia. AVONEX[®] should be used with caution in patients with depression and in patients with seizure disorders. Patients with cardiac disease should be closely monitored. Routine periodic blood chemistry and hematologic tests are recommended during treatment with AVONEX[®].⁵

£ Comparative clinical significance has not been established. ¶ Kaplan-Meier methodology, AVONEX[®] n=158, placebo n=143. * AVONEX[®] n=85, placebo n=87. Ω Using the Mann-Whitney rank-sum test. AVONEX[®] n=83, placebo n=82. # The exact relationship between MRI findings and clinical status is unknown. ** Analyzed by Wilcoxon rank-sum test. AVONEX[®] n=78, placebo n=80. + As measured by brain parenchymal fraction in a retrospective analysis, n=140, AVONEX[®] 68, placebo: 72. Δ The clinical correlation and significance of these findings require further assessment. † AVONEX[®] 67, placebo 70; n=137. ‡ AVONEX[®] 77, placebo 71, n=148. ◇ As demonstrated in the second year of the Phase III pivotal trial.

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Immune globulin intravenous (human) products have been associated with renal dysfunction, acute renal failure, osmotic nephrosis and death. Patients predisposed to acute renal failure should be administered the minimum concentration of human immune globulin products at the minimum rate of infusion.

Please see complete Prescribing Information on adjacent pages.

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Innovative manufacturing process.

- Novel process designed to protect fragile IgG molecules.¹
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Excellent tolerability profile.

- In a study of 97 ITP patients, 90% of adverse events were mild-to-moderate and transient.^{18*}

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- Liquid 10% formulation reduces volume load vs 5% formulations.^{1†‡}
- High maximum infusion rate reduces infusion time.^{1†}
- 5 months room temperature storage.^{1‡}
- Osmolality similar to physiologic osmolality.¹
- No added sugar stabilizers (such as sucrose or glucose).¹

New Gamunex™ trials design.

- Largest pivotal trials in IGIV in patients with primary humoral immunodeficiency (PID) and idiopathic thrombocytopenic purpura (ITP).^{1§}
- Head-to-head comparison in more than 350 patients vs Gamimune® N, 10%.¹

Proven efficacy in immune replacement therapy.

- Reduced the annual rate of validated sinopulmonary infection in PID (Gamunex™: 0.18 vs Gamimune® N, 10%: 0.43, $p = 0.023$).^{1¶}

Proven efficacy in immunomodulatory therapy.

- Gamunex™ demonstrated excellent response rates in chronic ITP (100%) and acute ITP (90%).^{2,3**}
- Excellent duration of platelet response (Gamunex™: 74% vs Gamimune® N, 10%: 60%).^{2,3††}

* Most common adverse events reported in a study of 97 ITP patients: headache (50%), vomiting (13%), fever (10%), nausea (10%), rash (6%), back pain (6%).

† Initial infusion rate is 0.01 to 0.02 mL/kg body weight/min for 30 minutes; if well tolerated, the rate may be gradually increased to a maximum of 0.14 mL/kg body weight/min.

‡ May be stored at room temperature ($\leq 25^{\circ}\text{C}$) for 5 months during first 18 months of manufacture after which product must be used or discarded.

§ Based on sizes of studies listed in Product Monographs of IGIV products currently marketed in Canada.

¶ Double-blind trial of 172 PID patients randomized to Gamunex™ or Gamimune® N, 10%.

** Double-blind trial of 97 ITP patients randomized to Gamunex™ or Gamimune® N, 10% response rate by day 7.

†† ITP study above; maintenance rate ($\geq 50 \times 10^9$ for 7 days); $p = 0.066$.

‡‡ Comparative clinical significance unknown.

Most common adverse events reported in PID were: cough increased (1.7%), headache (0.8%), fever (0.1%) and pharyngitis (0.8%).



new
gamunex™

A different IGIV.  immune globulin intravenous (human), 10% caprylate/chromatography purified

Dans le traitement au long cours de la
vos patients peuvent compter sur



SP rémittente, COPAXONE®

Effet démontré sur l'incapacité

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Réduction de la fréquence des poussées*

- Réduction de 35 % après neuf mois (0,50 {n = 113} c. 0,77 {n = 115} placebo, moyenne, $p = 0,0077$)¹.
- Réduction de 75 % après deux ans (0,60 {n = 25} c. 2,40 {n = 25} placebo, moyenne, $p = 0,005$)¹.

*Deux études indépendantes

Profil d'innocuité établi

- Innocuité démontrée depuis plus de sept ans dans les essais cliniques¹.
- Aucune surveillance en laboratoire des anomalies hépatiques ou sanguines n'est recommandée¹.

L'emploi de COPAXONE® est indiqué chez les patients ambulatoires atteints de sclérose en plaques (SP) rémittente en vue de réduire la fréquence des poussées. L'innocuité et l'efficacité de COPAXONE® dans la sclérose en plaques chronique progressive n'ont pas été établies.

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COPAXONE®
(acétate de glatiramère injectable)

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25 Years Ago in the Canadian Journal of Neurological Sciences

CYTOCHEMICAL LOCALIZATION OF ADENYLATE CYCLASE IN BROKEN CELL PREPARATIONS OF THE CEREBRAL CORTEX

S. W. French, D. S. Palmer and M. Caldwell

SUMMARY: Broken cell preparations derived from rat cerebral cortical grey matter were studied cytochemically to localize adenylyl cyclase (AC) activity in subcellular organelle membranes. AC activity was localized by visualizing reaction product in brain particulate fractions by electron microscopy. Activity was found in the endoplasmic reticulum, on the inside of the inner mitochondrial membrane and on both leaflets of the nuclear membrane. Reaction product was found in the postsynaptic density area of most synapses. The reaction product tended to be more prominent in the presence of fluoride. A synaptosome-rich fraction was shown to have NE stimulated AC activity which was blocked *in vitro* by both an α - and a β -blocker and *in vivo* by propranolol.

Can. J. Neurol. Sci. 1978;5: 33

ANESTHESIA IN MULTIPLE SCLEROSIS

C. Bamford, W. Sibley and J. Laguna

SUMMARY: The effect of general anesthesia on 42 multiple sclerosis (MS) patients who underwent 88 episodes of general anesthesia was analyzed. One patient experienced a relapse after a procedure under general anesthesia, which is compatible with the natural history of the disease. A literature review revealed little information on this subject or on the use of particular anesthetic agents in MS. Our experience with spinal and local anesthesia is reported. In the evaluation of the former our limited data suggested that spinal anesthesia is less preferable than other alternatives in MS. Local anesthetics had a benign effect on the course of MS.

Can. J. Neurol. Sci. 1978;5: 41

MICROANGIOGRAPHY AND VASCULAR PERMEABILITY OF THE SUBPENDYMAL MATRIX IN THE PREMATURE INFANT

Sachio Takashima and Kenzo Tanaka

SUMMARY: The microvascular architecture of the subependymal matrix in premature infants was studied with microangiography and benzidine stains. This revealed that the subependymal matrix is the end zone or the border zone between cerebral arteries and the collection zone of the deep cerebral veins. Focal hypoxic changes of this subependymal matrix may occur in hypoxemia and ischemia because of the characteristic architecture.

The vascular permeability of these vessels was studied in rabbits using three different molecular weights of FITC-dextran. Vascular permeability was increased in the subependymal matrix by hypoxia and especially by hypoxia associated with an increased venous pressure. These findings may be related to the pathogenesis of subependymal hemorrhage in prematurity.

Can. J. Neurol. Sci. 1978;5: 45



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LES



BIENFAIT

ET VOUS AIDENT À



NOUVEAU
SERINGUE PRÉEMPLIE DE DILUANT
INJECTION À pH NON ACIDE*†

+ PLUS GRANDE COMMODITÉ

- Se conserve discrètement et se transporte facilement grâce à une formulation sans réfrigération²
- Emballage tout en un permettant une préparation plus rapide que jamais²

+ EFFICACITÉ ÉPROUVÉE

- Réduit la fréquence et la gravité des poussées chez les patients atteints de SEP rémittente²⁻⁴

* pH de 7,1 à 7,8 après la reconstitution.

† L'importance clinique n'a pas été établie.

‡ Étude prospective et multicentrique. On a assigné les patients aléatoirement soit au groupe qui devait s'administrer 250 µg de Betaseron par voie s.-c. tous les deux jours, soit à celui qui devait s'administrer 30 µg d'interféron bêta-1a par voie i.m. une fois par semaine. Les clichés ont été analysés par un service central de chercheurs indépendants qui ne connaissaient pas le traitement que recevaient les patients ni leurs caractéristiques cliniques.



S S'ADDITIONNENT

OFFRIR DE MEILLEURS SOINS À VOS PATIENTS ATTEINTS DE SEP

+ SOINS PERSONNALISÉS

- Un appel suffit pour parler à votre infirmière de SEP LeParcours^{MC}
- Soutien spécialisé de SEP LeParcours^{MC} pour répondre à vos besoins et à ceux de vos patients atteints de SEP

+ RÉSULTATS SIGNIFICATIFS OBSERVÉS À L'IRM[†]

- Diminution de **60 %** du risque relatif (diminution de 29 % du risque absolu ; $p < 0,001$) d'apparition de nouvelles lésions T₂ avec Betaseron[®] (n = 76) comparativement à l'interféron bêta-1a i.m. (n = 73) après deux ans (la signification clinique comparative n'a pas été établie)²⁵

BETASERON[®] (interféron bêta-1b) est indiqué pour réduire la fréquence des poussées cliniques chez les patients ambulatoires atteints de sclérose en plaques rémittente. Il est également indiqué pour ralentir la progression de l'incapacité et réduire la fréquence des poussées cliniques chez les patients atteints de sclérose en plaques progressive-secondaire.

L'efficacité et l'innocuité de BETASERON[®] dans la SEP progressive-primaire n'ont pas été évaluées. On ne dispose pas de données probantes sur l'efficacité du traitement de la SEP rémittente au-delà de deux ans.

Chez les patients atteints de SEP rémittente, les effets indésirables les plus courants liés à l'utilisation de BETASERON[®] sont : syndrome grippal (76 %) ; fièvre (59 %) ; frissons (46 %) ; réactions au point d'injection (85 %) ; myalgie (44 %) ; asthénie (49 %) et malaise (15 %).

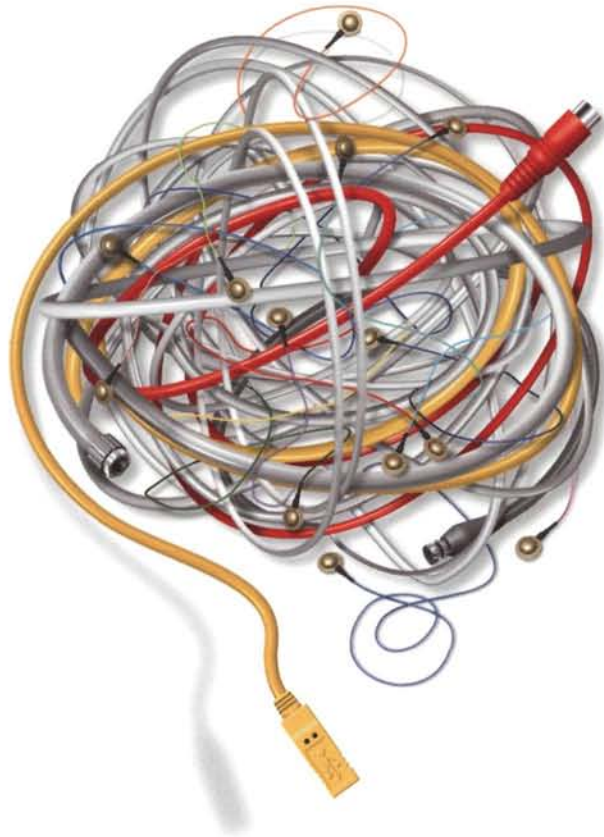
POUR PLUS DE DÉTAILS SUR LES MISES EN GARDE ET LES PRÉCAUTIONS, VEUILLEZ CONSULTER LA MONOGRAPHIE DE PRODUIT FOURNIE SUR DEMANDE AUX PROFESSIONNELS DE LA SANTÉ.



® BETASERON est une marque déposée de Berlex Canada inc.
MC SEP LeParcours est une marque de commerce utilisée sous licence par Berlex Canada inc.



From uncontrolled



New Keppra —
connecting excellent
profiles in efficacy
and tolerability


Effective control of seizures

- Shown to provide up to 4 out of 10 refractory patients with $\geq 50\%$ reduction in partial onset seizures ($p < 0.001$)
- Rapid clinical improvement demonstrated by week 2 during a 14-week evaluation period ($p < 0.001$)^{1*}

Keppra is indicated as adjunctive therapy in the management of patients with epilepsy who are not satisfactorily controlled by conventional therapy.

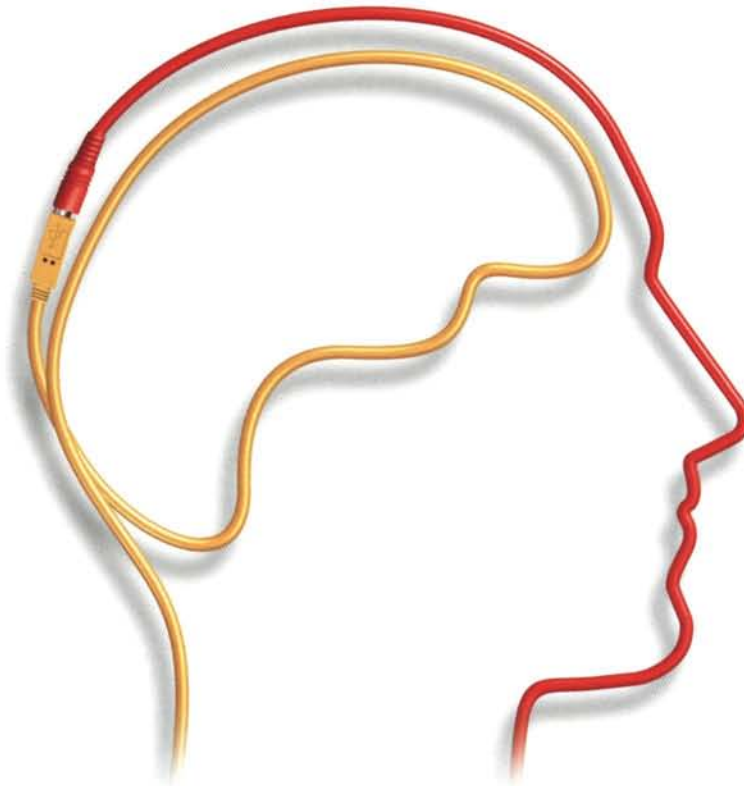
The most significant CNS adverse events were somnolence (Keppra 15% vs placebo 10%) and asthenia (Keppra 14% vs placebo 10%), behavioural/psychiatric symptoms (nonpsychotic: Keppra 14% vs placebo 6%; psychotic: Keppra 1% vs placebo 0%) and coordination difficulties (Keppra 3% vs placebo 2%). These adverse events were observed in controlled clinical trials with concomitant AEDs.



For more information, please refer to the complete Keppra Product Monograph.
* Keppra is a registered trademark of UCB SA. Distributed by Lundbeck Canada Inc. 

NOW
FULL BENEFIT
COVERAGE ON
QUEBEC AND
SASKATCHEWAN
FORMULARIES

to control



Generally well tolerated

- Favourable adverse event profile
- Adverse events not dose dependent[‡]
- Low discontinuation or dosage reduction (Keppra 14.3% vs placebo 11.7%) due to adverse events[†]

Efficacy and manageability right from the start

- Starting dose of 1000 mg/day (500 mg bid) shown to be effective and may be adjusted to a maximum of 3000 mg/day if required
- No blood level monitoring required
- No drug/drug interactions[†] with other AEDs, warfarin, digoxin or between Keppra 500 mg bid and a combination oral contraceptive (0.03 mg ethinyl estradiol and 0.15 mg levonorgestrel)[§]

§ Note: Pharmacokinetic interaction studies with contraceptives have not been conducted covering the full recommended dosage range of Keppra. Physicians should advise their female patients to be alert to any irregular vaginal bleeding or spotting and report any occurrences.

* Data from a 38-week multicentre, randomised, add-on, double-blind, placebo-controlled, parallel-group trial. Study consisted of a 4-week titration period followed by a 14-week evaluation period. Patients received either levetiracetam 1000 mg/day (n = 98), 3000 mg/day (n = 101) or placebo (n = 95). Patient weekly seizure frequency was reduced over placebo, at week 2 of the evaluation period, by 24.9% (1.120/1.406) for Keppra 1000 mg/day and 38.6% (0.918/1.406) for Keppra 3000 mg/day. The percentage of patients achieving ≥ 50% seizure reduction from baseline after the 18-week titration and evaluation period was 7.4% for placebo, 37.1% for Keppra 1000 mg/day and 39.6% for Keppra 3000 mg/day.

† Based on observations in clinical studies.

‡ C_{max} of levetiracetam's metabolite (ucb L057) was approximately doubled in presence of probenecid. Renal clearance of ucb L057 decreased by 60% in presence of probenecid.

NEW
Pr
Keppra[®]
levetiracetam

CONNECTING EXCELLENT PROFILES IN
EFFICACY AND TOLERABILITY

PORTRAIT OF A FAMILY HISTORY

HISTORY DOESN'T HAVE TO REPEAT ITSELF



Roger,
History of
angina.

Died age 57
of MI.

Help Reduce the
Risk of CV Death

by **26%**¹

($p < 0.001$; 6.1% vs. 8.1%)

Alice,
History of
diabetes and
high total
cholesterol.

Died age 62
of stroke.



ALTACE 10 mg
ramipril

GUARDING AGAINST CV DEATH

ALTACE is indicated in the treatment of essential hypertension, normally when beta-blockers and diuretics are inappropriate. It may be used alone or in association with thiazide diuretics. ALTACE is indicated following acute myocardial infarction in clinically stable patients with signs of left ventricular dysfunction to improve survival and reduce hospitalizations for heart failure.

Results from the HOPE study showed that ALTACE improved survival in patients by reducing the risk of CV death by 26% ($p < 0.001$; 6.1% vs. 8.1%). ALTACE may be used to reduce the risk of MI, stroke, or CV death in patients over age 55 who are at high risk of CV events because of a history of CAD, stroke, peripheral artery disease, or diabetes accompanied by at least 1 other CV risk factor such as hypertension, elevated total cholesterol levels, low HDL levels, cigarette smoking, or documented microalbuminuria.

Like other ACE inhibitors, ALTACE is not recommended for pregnant or lactating women and should be used with caution in patients with renal insufficiency. The most frequent adverse events occurring in clinical trials with ALTACE monotherapy in hypertensive patients who were treated for at least 1 year ($n=651$) were: headache (15.1%); dizziness (3.7%); asthenia (3.7%); chest pain (2.0%). Discontinuation of therapy due to clinical adverse events was required in 5 patients (0.8%).

The reasons for stopping treatment were cough (ramipril 7.3% vs. placebo 1.8%); hypotension/dizziness (1.9% vs. 1.5%) and edema (0.4% vs. 0.2%).

ALTACE is the most prescribed ACEI among cardiologists.*

* IMS Health Canada: Canadian CompuScript Audit, Year 2002 Total Prescriptions



Product Monograph available to physicians and pharmacists upon request.

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